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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/926,718	03/25/2002	Jacques Point	P21772	6462
7055	7590	02/14/2005	EXAMINER	
GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191			WINSTON, RANDALL O	
			ART UNIT	PAPER NUMBER
			1654	

DATE MAILED: 02/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/926,718

**Applicant(s)**

POINT ET AL.

**Examiner**

Randall Winston

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 0402.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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### **DETAILED ACTION**

The Restriction/Election Requirement made on 10/01/2004 has been overcome by Applicant's response on 11/01/2004. Please note that applicant's working examples have demonstrated a method of preparing the claimed product, a heat-stable extract, whereas the heat-stable extract has the claimed functional effects of claims 1-20.

Claims 1-20 are under examination on the merits.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gudín et al. (US 5,179,012) in view of Tassigny (Action of Calcium on the Growth of *Axenic Demids*, Internationale Vereinigung Für Theoretische Und Angewandte Limnologie, Mitteilungen No. 19, P. 292-313, November 1971, see abstract).

Applicant claims a method of obtaining a heat-stable extract having antioxidant and wound healing activity (in addition to antiradical activity, tissue regeneration activity, slow skin aging activity, anti-inflammatory activity and biological control of plant parasite activity) from a culture medium of microalgae comprising first culturing said microalgae in a photobioreactor subject to appropriate lighting and controlled conditions of temperature, pH, and supply of carbon dioxide, adding 100 mg/l of potassium

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bicarbonate to the culture medium after a period of the claimed days, then closing the photobioreactor for a claimed period to obtain oxygen supersaturation, then separating the microalgae from the culture medium by centrifuging, and finally filtering said culture medium on an appropriate filter for separating said extract.

Gudin et al. teach (see, e.g. abstract, column 2 lines 1-10, column 3 lines 17-58, column 4, lines 1-50) a method of obtaining a heat-stable extract having antioxidant activity from a culture medium of microalgae comprising first culturing said microalgae in a photobioreactor subject to appropriate lighting and controlled conditions of temperature, pH, and supply of carbon dioxide, closing the photobioreactor for the period to obtain oxygen supersaturation, then separating the microalgae from the culture medium by crushing and grinding. Gudin et al. do not expressly teach adding 100 mg/l of potassium bicarbonate to the culture medium, separating the microalgae from culture medium by centrifuging and filtering said culture medium on an appropriate filter for separating said extract to produce the claimed heat-stable extract.

Tassigny beneficially teaches (see, e.g., abstract) that a potassium salt can be added to a culture medium containing a microalgae for the purpose of maintaining growth of a microalgae.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Gudin et al.'s teachings and to include the beneficial teachings of Tassigny because the above combined teachings would create an improved method of preparing a heat-stable extract whereas the improved heat-stable extract would intrinsically have the claimed functional effects such as antioxidant and

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wound healing activity, antiradical activity, tissue regeneration activity, slow skin aging activity, anti-inflammatory activity and biological control of plant parasite activity when administered to a subject . The adjustment of these and other conventional working conditions (e.g. separating the microalgae from the culture medium by centrifuging instead of crushing and grinding, the claimed additional step of filtering the culture medium whereas the claimed filter step would only provide for a more purified heat-stable extract, the substitution of one functional equivalent potassium salt for another such as the substitution of potassium bicarbonate for another potassium salt for the purpose of maintaining the growth of the microalgae, the claimed period of closing the photobioreactor, and the type of composition such as a food product and/or cosmetic), is deemed merely a matter of judicial selection and routine optimization which is well within the purview of the skilled artisan.

Accordingly, the invention as a whole was prima facie obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Randall Winston whose telephone number is 571-272-0972. The examiner can normally be reached on 8AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bruce Campell can be reached on 571-272-0974. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Susan D. Coe*  
*2-10-05*  
SUSAN D. COE  
PATENT EXAMINER